

# COMMITED TO QUALITY AND CUSTOMER CARE

of Engineers
Walla Walla District

# **Geographic Information Systems**

Capabilities, Interconnectivity, and Management

The Walla Walla District became the first Corps District to establish an automated Geographic Information Systems (GIS) when the system was brought on-line in 1988.

#### **Applications:**

GIS has been used over the past 10 years to produce products and reports for:

- Facility Management Databases
- •Fish and Wildlife Species Location
- Habitat Evaluation Procedures (HEP)
- Predictive Modeling
- Master Planning
- Habitat Planning
- Survey and Mapping Database
- Operational Management Plans
- Land Cover Analysis
- Feasibility Reports
- Endangered Species Evaluation
- •Reconnaissance Reports
- Cultural Resource Evaluation
- Project Information
- Forest Modeling
- Emergency Management
- •Real Estate Inventory
- Special Briefings

#### How to reach us

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#### **GIS Services**:

The Walla Walla District's GIS services range from implementation planning for GIS to complex GIS project management with interconnectivity to other databases.

#### **Project Management:**

Implementation of GIS hardware and software; and requirements for personnel, training, and development. Maintenance, as well as management, of a complete GIS project.

# **GIS Implementation Planning:**

Providing a GIS that includes all potential users within the corporation.

#### **Strategic Planning:**

Updating and maintaining the current



data, as well as planning for the needs of the future.

## Multiple GIS Project Management:

Managing more that one GIS project under the same standards.

#### **Life-Cycle Utilization:**

Using GIS from the inception of a project through its operations and maintenance phase.

#### **Data Management:**

The storage and organization of the GIS data library.

**System Linkages:** Linking GIS data to other information systems.

Spatial Data Standards: Use of the Tri-Service Spatial Data Standards, or customizing special standards, for the corporate database, thereby allowing more efficient data retrieval and management.

### Data Recoverability:

**Spatial Data Index:** Visual index of multiple GIS databases.

# <u>Data Research, Capture and Processing:</u>

**Data transfer:** From paper files or external electronic spatial (CADD) and non-graphical database sources

Aerial photography: Various scales and types

**Stereo Plotting**: In-house analytical stereo plotting

#### Scanning

Large Scale - gray scale
Small Scale - color
Global Positioning Systems (GPS):
Survey, data collection and verification
Automated data conversion: Rastor to
vector transfer

**Data manipulation:** Map projection, rubber sheeting, heads-up digitizing

## **Data Analysis:**

**Spatial Analysis:** Understanding and discovering what the data means

**Spatial Synthesis**: Problem-solving models through combinations of data layers

**Reports:** Database-generated reports.

#### **Visualization:**

Transforming data through a visualization process for use in reports, posters, public meetings, and World Wide Web sites. Presentation of the data is of the utmost importance in communicating with users.

Report plates GIS on the WWW 3-D Draping

#### **Expertise:**

The Walla Walla District has been using GIS technology for 10 years as a tool for data management, problem solving, and analysis. Over this 10-year period, the successful application of GIS has made the Walla Walla District a leader in GIS expertise within the Department of Defense (DOD). GIS has been utilized in the District by:

- Fisheries Biologists
- Surveyors
- Wildlife Biologists
- Cartographic Technicians
- Ecologists
- Environmental Specialists
- Civil Engineers
- Economists
- Recreation Specialists
- Park Rangers
- Resource Managers
- Supervisors
- Landscape Architects